Safety instructions VEGADIS 176 Ex (DIS176.ICSI)

IECEx PTB 15.0002 X

Ex ib IIC T6 Gb

CE 0044

Document ID: 50016

VEGA

Contents

Please note:

These safety instructions are part of the documentation:

- 47916 - VEGADIS 176
- 49684 - Certificate of Conformity IECEx PTB 15.0002 X

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1 Area of applicability

These safety instructions apply to VEGADIS 176 Ex (DIS176.ICSI) according to the Certificate of Conformity IECEx PTB 15.0002 X (certificate number on the type label) and to all instruments with the number of the safety instruction (50016) on the type label.

2 General information

The VEGADIS 176 Ex (DIS176.ICSI) is an intrinsically safe, scalable, digital indicating instrument without external energy for installation in hazardous areas of zone 1. It is looped into intrinsically safe 4 … 20 mA circuits. The voltage supply for power supply of the electronics is taken from the 4 … 20 mA circuit.

The VEGADIS 176 Ex (DIS176.ICSI) is suitable for use in hazardous atmospheres of all combustible materials of explosion group IIA, IIB and IIC for applications requiring EPL-Gb instruments.

If the VEGADIS 176 Ex (DIS176.ICSI) are installed and operated in hazardous areas, the general Ex installation regulations IEC 60079-14 as well as these safety instructions must be observed.

The operating instructions as well as the installation regulations or standards that apply for explosion protection of electrical systems must generally be observed.

The installation of explosion-endangered systems must always be carried out by qualified personnel.

EPL-Gb instrument

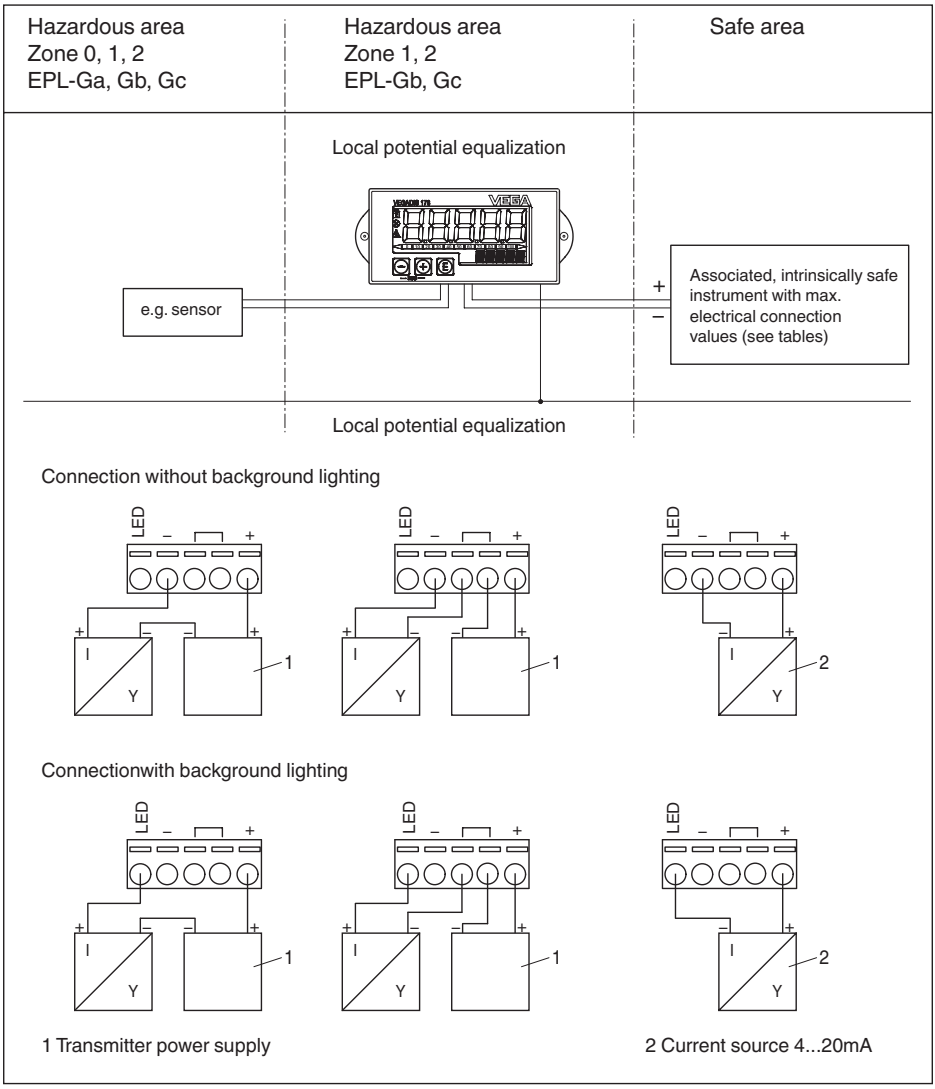
The VEGADIS 176 Ex (DIS176.ICSI) is installed in hazardous areas requiring an EPL-Gb instrument of category 2G (EPL-Gb). The VEGADIS 176 Ex (DIS176.ICSI) can be looped in an intrinsically safe circuit of EPL-Ga instruments.

3 Technical data

Electrical connection values
VEGADIS 176 Ex (DIS176.ICSI)

Voltage supply: (terminals + and - or + and LED or + and auxiliary terminal Π)	$U_i \leq 30$ V DC $I_i \leq 200$ mA $P_i \leq 900$ mW $L_i = 35.1$ µH C_i = negligibly small

Temperature class	Ambient temperature
T6	-40 … +60 °C



4 Installation/construction

No potential equalisation on the complete circuit between VEGADIS 176 Ex (DIS176.ICSI) and the sensor(s), associated instrument required.

The required isolation voltage is > 500 V AC.

For applications requiring instruments of EPL-Gb, the intrinsically safe power supply and signal circuit can correspond to protection class ia or ib. For connection to a circuit with protection class ib, the ignition protection type identification is Ex ib IIC T6.

For applications requiring EPL-Ga instruments, the intrinsically safe power supply and signal circuit

must be in conformity with protection class ia.

The permitted category of the intrinsically safe circuit for the sensor depends on the flame proofing of the associated instrument used.

5 Grounding/Potential equalization

In order to avoid the danger of electrostatic charging of the housing, the VEGADIS 176 Ex (DIS176.ICSI), used as EPL-Gb instrument, must be electrostatically connected to the local potential equalisation (transfer resistance ≤ 1 MΩ), e.g. via the ground terminal.

6 Material resistance

The VEGADIS 176 Ex (DIS176.ICSI) must only be used in media against which the materials of the wetted parts are sufficiently resistant.

7 Impact and friction sparks

The VEGADIS 176 Ex (DIS176.ICSI) in light metal versions (e.g. aluminium/titanium/zircon) must be mounted in such a way that sparks from impact and friction between light metals and steel (except stainless steel, if the presence of rust particles can be excluded) cannot occur.

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